



Virginia
Regulatory
Town Hall

Proposed Regulation Agency Background Document

Agency Name:	Virginia Department of Health
VAC Chapter Number:	12 VAC 5-610-10 et seq.
Regulation Title:	Sewage Handling and Disposal Regulations
Action Title:	Amendments for Mass Sewage Disposal Systems and Allowable Rock Content of Soils
Date:	December 17, 2001

This information is required pursuant to the Administrative Process Act (§ 9-6.14:9.1 *et seq.* of the *Code of Virginia*), Executive Order Twenty-Five (98), Executive Order Fifty-Eight (99), and the *Virginia Register Form, Style and Procedure Manual*. Please refer to these sources for more information and other materials required to be submitted in the regulatory review package.

Summary

Please provide a brief summary of the proposed new regulation, proposed amendments to an existing regulation, or the regulation proposed to be repealed. There is no need to state each provision or amendment or restate the purpose and intent of the regulation; instead give a summary of the regulatory action and alert the reader to all substantive matters or changes. If applicable, generally describe the existing regulation.

Mass sewage disposal systems (systems larger than 1200 gallons per day per acre) have a greater potential for failure than domestic and small-commercial onsite systems. These large systems also pose a higher risk of ground water contamination than smaller systems. The amendments include standards for proper siting, design, construction, operation, and monitoring of mass sewage disposal systems. The amendments will also establish criteria for the amount or percentage of rock allowed in the soils around and below a soil absorption system.

Basis

Please identify the state and/or federal source of legal authority to promulgate the regulation. The discussion of this statutory authority should: 1) describe its scope and the extent to which it is mandatory or discretionary; and 2) include a brief statement relating the content of the statutory authority to the specific regulation. In addition, where applicable, please describe the extent to which proposed changes exceed federal minimum requirements. Full citations of legal authority and, if available, web site addresses for locating the text of the cited authority must be provided. Please state that the Office of the Attorney General has certified that the agency has the statutory authority to promulgate the proposed regulation and that it comports with applicable state and/or federal law.

Statutory authority for the amendments is found in §§ 32.1-12 and 32.1-164 of the Code of Virginia. The website URLs citing this authority are < <http://leg1.state.va.us/cgi-bin/legp504.exe?000+cod+32.1-12> > and < <http://leg1.state.va.us/cgi-bin/legp504.exe?000+cod+32.1-164> >. The Board of Health has responsibility for the safe and sanitary collection, conveyance, treatment, and disposal of sewage as they affect public health and welfare. In addition, the Board is required, in discharging its responsibility for safe and sanitary sewage treatment and disposal, to exercise due diligence to protect the quality of both surface and ground water. The regulation of mass sewage disposal systems and the quantity of rock allowed in soils are not specifically mandated by the Code. There are no federal minimum requirements regarding the topics of the regulation. The Office of Attorney General has certified that the Department has the authority to promulgate the proposed regulations and that it comports with applicable state and/or federal law.

Purpose

Please provide a statement explaining the need for the new or amended regulation. This statement must include the rationale or justification of the proposed regulatory action and detail the specific reasons it is essential to protect the health, safety or welfare of citizens. A statement of a general nature is not acceptable, particular rationales must be explicitly discussed. Please include a discussion of the goals of the proposal and the problems the proposal is intended to solve.

Mass Sewage Disposal Systems:

The 1991 Report of the Task Force on Septic Regulations recommended that the Board of Health consider requiring treatment for nitrogen where clusters of systems or large systems create high loading rates in a limited geographic area. The Task Force also recommended establishing clear requirements for maintenance and oversight for systems serving multiple dwellings. The MSDS regulations were based on the Task Force recommendations and existing Department policy intended to establish standards for mass drainfields.

In 1996 the Board published proposed regulations for public comment that included MSDS requirements. In 1996 there were 12 public hearings followed by a period of many months during which the Department worked with various constituent groups to address concerns raised during the public comment period. One of the groups with which the Department worked (on MSDS issues) included developers and engineers from the Smith Mountain Lake area.

On August 16, 1999, the Board published final amendments that were to have been effective October 1, 1999. On September 16, 1999, the regulatory process was suspended because of requests for an additional public comment period (Code of Virginia, § 9-6.14:7.1.K). Two additional 30-day comment periods followed between October 11, 1999, and January 19, 2000. On April 24, 2000, the Board of Health published final amendments to the Sewage Handling and Disposal Regulations to be effective July 1, 2000. Those amendments contained new regulations for Mass Sewage Disposal Systems.

On June 8, 2000, Department representatives met with Senator Newman, Speaker of the House Vance Wilkins, Delegate Putney and several others representing development interests and the engineering and consulting communities, especially those located near Smith Mountain Lake, to hear their concerns regarding the MSDS regulations. That group asked that the Department delay implementation of the MSDS regulations. The group said that there had not been enough public input in the regulatory process. They asked for evidence of problems with nitrates in ground water (the MSDS regulation established limits and rules for dealing with nitrogen and nitrates from wastewater), they complained about the economic impact of the regulations (dilution area downslope, 5 mg/l vs 10 mg/l nitrate standard, 30% volatilization vs 50%, secondary treatment), and complained that the regulation failed to address maintenance of MSDS.

The types of development primarily impacted by the MSDS regulations include multi-family condominium-style housing and commercial enterprises (i.e. shopping centers, restaurants) utilizing onsite wastewater systems. Single-family housing also would have been subject to the MSDS requirements, but only at the time of subdivision planning. The legislators indicated that there would be legislation to repeal the regulations that they found unacceptable.

Shortly after the June meeting, Department staff advised Commissioner Peterson that she should act for the Board of Health and withdraw the MSDS regulation prior to the effective date. After consulting with the OSHHR, Commissioner Peterson withdrew the regulation with the understanding that the Department would immediately publish a Notice of Intended Regulatory Action to promulgate a new MSDS regulation with additional input from the affected parties. The NOIRA was published July 17, 2000.

Soils Containing Greater than 50% Rock:

The 1991 Task Force recommended that Virginia examine the definition of rock and the adequacy of the current regulations regarding separation distances to rock. The final amendments published August 16, 1999, contained certain restrictions on the use of soils containing greater than 50% rock by volume. Those requirements would have affected land owners seeking permits in areas of the state characterized by hilly or mountainous terrain with

relatively shallow soils underlain by bedrock. Two primary examples of these regions would be the Shenandoah Valley and the mountainous regions of southwestern Virginia, particularly the counties of Wise, Dickinson, Buchanan, Scott, Lee, and Tazewell.

As noted above, the final amendments did not take effect on October 1, 1999, because the regulatory process was suspended for additional public comment periods. On December 16, 1999, and again on January 13, 2000, the Department met with various constituents, public officials and local government representatives in the Shenandoah Valley area to hear their concerns about the 50% rock regulation. In those meetings, there was a representative of Del. Lauderbach, representatives from Clarke and Shenandoah Counties, the Loud Fairfax Planning District Commission, soil and engineering consultants, and citizen landowners.

The concerns expressed by the group dealt primarily with economic impacts. The new requirements would increase the cost of development for a substantial portion of the land (unofficial estimate of 43% in Shenandoah Co.) and eliminate development on a smaller fraction of land (5% - 8%). Another concern, expressed by local government officials, was that the new rule encouraged the use of alternative sewage systems but failed to impose operation and maintenance requirements on those systems.

During the 2000 session of the General Assembly House Bill 1333 was introduced that would have excluded Planning Districts One and Two from the new regulations. The patron, Delegate Phillips, agreed to withdraw the bill when the Department offered to withdraw the 50%-rock regulation and meet with representatives from southwestern Virginia to explore alternatives to the regulation as it was written. The final regulation published April 24, 2000, did not contain the restrictions on soils containing greater than 50% rock. The NOIRA published July 17, 2000, included provisions to reintroduce requirements for soils containing greater than 50% rock.

The primary purpose of these amendments are to protect public health by protecting the quality of ground and surface waters (statutory mandate to exercise due diligence, Code of Virginia, 32.1-164). The Department's onsite regulations are increasingly viewed as part of the overall water quality protection strategy of the Commonwealth. The Department has been working closely with the Department of Environmental Quality, the Department of Conservation and Recreation, and others in their water quality initiatives (Water Quality Improvement Act). These agencies have continued to express concerns about the impact of failing drainfields and inadequate onsite regulations on water quality.

The goals of both regulations are to transform existing policy into regulation so that it is enforceable and clear to all involved. For many years, mass drainfields and the amount of rock in and around a drainfield have been regulated informally with questionable consistency. These proposals are based on science and formalize what we've learned the last 15 years. They have been written with the consent of Ad Hoc Committees made up regulators, engineers, soil scientists, local government from the private and public sector.

Please identify and explain the new substantive provisions, the substantive changes to existing sections, or both where appropriate. Please note that a more detailed discussion is required under the statement providing detail of the regulatory action's changes.

Substantive provisions to the mass drainfield proposal include special requirements, absorption area design table, site assessment, verification, monitoring, and a sampling schedule. The substance of the percentage of allowable rock around a drainfield includes definitions, soil characteristics that determine suitability and a table summarizing separation distances between certain systems and the limiting factor of soils containing a high volume of rock fragments.

Issues

Please provide a statement identifying the issues associated with the proposed regulatory action. The term "issues" means: 1) the primary advantages and disadvantages to the public, such as individual private citizens or businesses, of implementing the new or amended provisions; 2) the primary advantages and disadvantages to the agency or the Commonwealth; and 3) other pertinent matters of interest to the regulated community, government officials, and the public. If there are no disadvantages to the public or the Commonwealth, please include a sentence to that effect.

The primary advantage to the proposals is the enhanced protection of groundwater resources from contamination by onsite sewage disposal systems. The monitoring and maintenance requirements for mass drainfields assure systems are running efficiently and satisfactorily. This saves owners of businesses from expensive repairs due to lack of inspections on large and somewhat complex systems. These repair costs would usually be passed along, in some manner, to individual consumers and citizens. Soils are used to naturally clean up sewage effluent. Assuring that there is adequate soils and not too many rock fragments, prevents untreated sewage from entering shallow groundwater horizons. This benefits citizens by protecting natural groundwater resources and by preventing contamination of aquifers used for drinking water supplies. The Department perceives no disadvantages to these proposals.

Fiscal Impact

Please identify the anticipated fiscal impacts and at a minimum include: (a) the projected cost to the state to implement and enforce the proposed regulation, including (i) fund source / fund detail, (ii) budget activity with a cross-reference to program and subprogram, and (iii) a delineation of one-time versus on-going expenditures; (b) the projected cost of the regulation on localities; (c) a description of the individuals, businesses or other entities that are likely to be affected by the regulation; (d) the agency's best estimate of the number of such entities that will be affected; and e) the projected cost of the regulation for affected individuals, businesses, or other entities.

There are no anticipated additional costs to the state to implement and enforce the regulation. Existing staff should be able to absorb the regulatory requirements into their work duties. There are also no anticipated costs to localities from either the mass drainfield or allowable rock proposals.

Local government objections to economic impacts would be more significant if they experience decreases in real estate values (tax base) resulting from decreased housing values occurring as a result of increased costs of onsite wastewater systems. The Department believes that the final amendments will not affect the overall value or number of statewide housing units.

Individuals building septic systems in the western portions of the state, where most of the rocky soils are found, will be affected by the allowable rock proposal; however, there should be no additional impact than what is encountered today. Developers subdividing lots for homesites and small business owner (restaurants, strip shopping centers, schools) may be affected by the mass drainfield proposal. The Department's best estimate of the number of such entities affected annually is as follows: citizens = 1,000; developers = 50; small businesses = 50; schools = 25. The projected cost of the proposed regulations for affected individuals and entities is as follows: citizens developing individual lots = \$0.00; developers, other entities = 100 mass drainfields x \$1,000/yr. for operation and maintenance contracts + \$200/system for recordation fees = \$120,000.

Detail of Changes

Please detail any changes, other than strictly editorial changes, that are being proposed. Please detail new substantive provisions, all substantive changes to existing sections, or both where appropriate. This statement should provide a section-by-section description - or cross-walk - of changes implemented by the proposed regulatory action. Where applicable, include citations to the specific sections of an existing regulation being amended and explain the consequences of the proposed changes.

Mass Sewage Disposal Systems: "Special Requirements" section gives the purpose of the regulation, examples of facilities affected and a definition of ownership. It also explains uniform distribution, absorption area requirements, recordation and the review process. The "Site Assessment" section requires a professional engineer to prepare calculations, discusses nitrate evaluation, dilution areas, mass balance, nitrate-nitrogen, water mounding, wastewater strength, geo-technical evaluation, system performance, frequency of sampling, and reporting. Allowable rock content in a drainfield: There is a definition of rock fragment. Another section details where septic tank effluent can be used as opposed to where secondary treatment of the effluent is required. Existing tables for different type systems are updated showing rock fragments as a limiting site factor.

These regulations have been designed in a way that greatly increases ground water protection in many parts of the state but with only very modest increases in costs.

Alternatives

Please describe the specific alternatives to the proposal considered and the rationale used by the agency to select the least burdensome or intrusive alternative that meets the essential purpose of the action.

Mass sewage disposal systems have been subject to certain permitting and design restrictions since 1984 under general provisions of the Sewage Handling and Disposal Regulations. These requirements enforced by policy will remain in place during this regulatory adoption period. Likewise the allowable rock content has been enforced by policy. These regulations will solidfy and clarify Department policy. Current science, onsite wastewater practices and technology were used in formulating these regulations in order to further enhance protection of ground and surface water resources.

Public Comment

Please summarize all public comment received during the NOIRA comment period and provide the agency response.

Numerous substantive comments were received leading to modifications of both proposals.

Clarity of the Regulation

Please provide a statement indicating that the agency, through examination of the regulation and relevant public comments, has determined that the regulation is clearly written and easily understandable by the individuals and entities affected.

The regulation has undergone numerous drafts and reviews both internally and by Ad Hoc Committees to clarify the language and terms to assure it is understandable. Primarily, engineers and system designers will be using these regulations. It is written in language and jargon that is customary in the onsite wastewater industry and in the practice of engineering.

Periodic Review

Please supply a schedule setting forth when the agency will initiate a review and re-evaluation to determine if the regulation should be continued, amended, or terminated. The specific and measurable regulatory goals should be outlined with this schedule. The review shall take place no later than three years after the proposed regulation is expected to be effective.

No later than January 2, 2005, the Department will initiate a review of the amendments to determine whether it should be continued, amended, or terminated. This review will include inquiries to local governments to assess the effectiveness of the regulations and to highlight any unresolved conflicts with local ordinances and procedures. Also included in the review will be an assessment and summary of all instances statewide where lots or projects were denied only due to the enforcement of these two proposals. The Sewage Handling and Disposal Advisory Committee is another resource for the periodic review.

Family Impact Statement

Please provide an analysis of the proposed regulatory action that assesses the potential impact on the institution of the family and family stability including the extent to which the regulatory action will: 1) strengthen or erode the authority and rights of parents in the education, nurturing, and supervision of their children; 2) encourage or discourage economic self-sufficiency, self-pride, and the assumption of responsibility for oneself, one's spouse, and one's children and/or elderly parents; 3) strengthen or erode the marital commitment; and 4) increase or decrease disposable family income.

The regulation is expected to result in some economic impact that may translate to higher costs for homes and businesses that utilize onsite systems. However, these costs are believed to be reasonable because the regulations will provide significant protections for ground and surface waters and for public health. Protecting the quality of life by preserving the environment is a positive benefit that can strengthen the Commonwealth's economy and its families.